JN308 / JN316

User Manual (v1.00.00)

For H.264 4/8/16-channel digital video recorder

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CAUTION

- Please read this user manual carefully to ensure that you can use the device correctly and safely.
- We do not warrant all the content is correct. The contents of this manual are subject to change without notice.
- This device should be operated only from the type of power source indicated on the marking label. The voltage of the power must be verified before using the same. Kindly remove the cables from the power source if the device is not to be used for a long period of time.
- Do not install this device near any heat sources such as radiators, heat registers, stoves or other devices that produce heat
- Do not install this device near water. Clean only with a dry cloth.
- Do not block any ventilation openings and ensure proper ventilation around the machine.
- Do not power off the DVR when the device is functioning. The correct operation to shut down the DVR is to first stop recording and then use “shut-down” button from the menu, and finally switch off the main power.
- This machine is for indoor use only. Do not expose the machine in rain or moist environment. In case any solid or liquid get inside the machine’s case, please turn off the device immediately and get it checked by a qualified technician.
- Do not try to repair the device by yourself without technical aid or approval.
- This manual is suitable for 4/8/16-channel digital video recorders. All examples and pictures used in the manual are from 16-channel DVR.

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1 Introduction

1.1 DVR Introduction

This model DVR (Digital Video Recorder) is designed specially for CCTV system. It adopts high performance video processing chips and embedded Linux system. Meanwhile, it utilizes many most advanced technologies, such as standard H.264 with low bit rate, Dual stream, SATA interface, VGA output mouse supported, IE browser supported with full remote control, which ensure its powerful functions and high stability. Due to these distinctive characteristics, it is widely used in banks, telecommunication, transportation, factories, warehouse, and irrigation and so on.

1.2 Main Features

COMPRESSION FORMAT

- Standard H.264 compression with low bit rate and better image quality

LIVE SURVEILLANCE

- Support VGA/BNC/HDMI output
- Support channel security by hiding live display
- Display the local record state and basic information
- Support USB to make full control

RECORD MEDIA

- Support eight SATA HDDs to record for a longer time without any limitation

BACKUP

- Support USB 2.0 devices to backup
- Support built-in SATA DVD writer to backup

- Support saving recorded files with AVI standard format to a remote computer through Internet

RECORD & PLAYBACK

- Recording modes: Manual, Schedule, Motion detection and Sensor alarm recording
- Support cycle mode after HDD full
- Resolution, frame rate and picture quality are adjustable
- 4/8/16 audio channels available
- Two record search mode: time search and event search
- Support 4/8/16 screen playback simultaneously
- Support deleting and locking the recorded files one by one
- Support remote playback in Network Client through LAN or Internet

ALARM

- 4 channel alarm output and 4/8/16 channel alarm input available
- Support schedule for motion detection and sensor alarm
- Support pre-recording and post recording
- Support linked channels recording once motion or alarm triggered on certain channel
- Support linked PTZ preset, auto cruise and track of the corresponding channel

PTZ CONTROL

- Support various PTZ protocols
- Support 128 PTZ presets and 8 auto cruise tracks
- Support remote PTZ control through internet

SECURITY

- Customize user right: log search, system setup, two way audio, file management, disk management, remote login, live view, manual record, playback, PTZ control and remote live view
- Support 1 administrator and 63 users.
- Support event log recording and checking, unlimited events

NETWORK

- Support TCP/IP, DHCP, PPPoE, DDNS protocol
- Support IE browser to do remote viewing
- Support setup client connection account
- Support dual stream. Network stream is adjustable independently to fit the network bandwidth and environment.
- Support picture snap and color adjustment in remote live
- Support remote time and event search, and channel playback with picture snap
- Support remote PTZ control with preset and auto cruise
- Support remote full menu setup, changing all the DVR parameters remotely
- Support CMS to manage multi devices on Internet

2 Hardware Installation

Notice: Check the unit and accessories after getting the DVR.

Please don't power up the unit till the physical installation is completed.

2.1 Install Hard Drive & DVD Writer

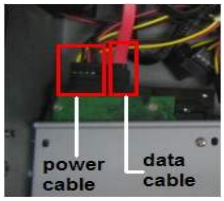
2.1.1 Install Hard Drive

Notice: 1. This series supports eight SATA hard drives. Please use the hard drive the manufacturers recommend specially for security and safe field.

2. Please calculate HDD capacity according to the recording setting. Please refer to "Appendix B Calculate Recording Capacity".

Step 1: Unscrew and open the case and then unscrew the screws in the both sides to take out of the upper iron bar as shown below:

Step 2: Put the HDD under the lower iron bar and let the screw holes of the HDD aim at the iron bars'. Then screw firmly and connect the power and data cables. The pictures are shown as follows:



Step 3: Install other three HDD according to above-mentioned method. Then cover the upper iron bar and screw it firmly. Put the

HDD under it and screw firmly as shown below:

Step 4: Install other three HDD under the upper iron bar as shown below:

Step 5: Cover the back cover of the device and screw firmly.

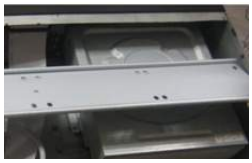
2.1.2 Install DVD Writer

Step 1: Unscrew and open the case and then unscrew the screws in the both sides to take out of the upper iron bar as shown below:

Step 2: Unscrew the four screws in the back of the front panel as shown below and then take out of the brace with a triangular mark.

Step 3: Install the DVD holder attached with the device. Please let the screw holes of the DVD aim at the holder's. Try to place the holder farther away from the front and then screw firmly. Then, put the DVD with the holder into the case and let the screw holes of the case aim at the holder's. Next, screw them firmly.

Step 4: Connect the power and data cables and install the upper iron bar. Then, screw firmly with screws in the both sides.



Note: If the user installs a DVD, DVR can only be installed with 4 HDD disks only.

2.2 Front Panel Descriptions

Notice: The front panel descriptions are only for reference; please make the object as the standard.

Notice: The USB port on front panel can only connect to USB backup device.

Item	Type	Name	Description
1	Work state indicator	Power	Power indicator, when connection , the light is blue
		HDD	When HDD is writing and reading , the light is blue
		Net	When access to network , the light is blue
		Backup	When backup files and data, the light is blue
		Play	When playing video, the light is blue
		REC	When recording, the light is blue
2	Compound button	AUDIO/+	1. Control voice 2. Increase the value in setup
		P.T.Z./ -	1. Enter PTZ mode in live 2. Decrease the value in setup
		MENU	Enter menu in live
		INFO	Check recording data
		BACKUP	Enter backup mode in live
		SEARCH	Enter search mode
			Record manually
			Play/Pause
			Exit
			Rewind
			Fast forward
3	Digital button	1-9	Input number 1-9 or choose camera
		0/10+	Input number0, 10 and the above number together with other digital keys
4	Input button	Direction button	Change direction to select items
		Multi-screen	Change screen display mode like1/4/9/16 channel
		Enter button	Confirm selection
5	USB	USB port	To connect external USB devices like USB flash, USB HDD for backup or update firmware;

2.3 Rear Panel Instructions

Note: These Rear Panels are only for reference. Please Take the real object as standard.

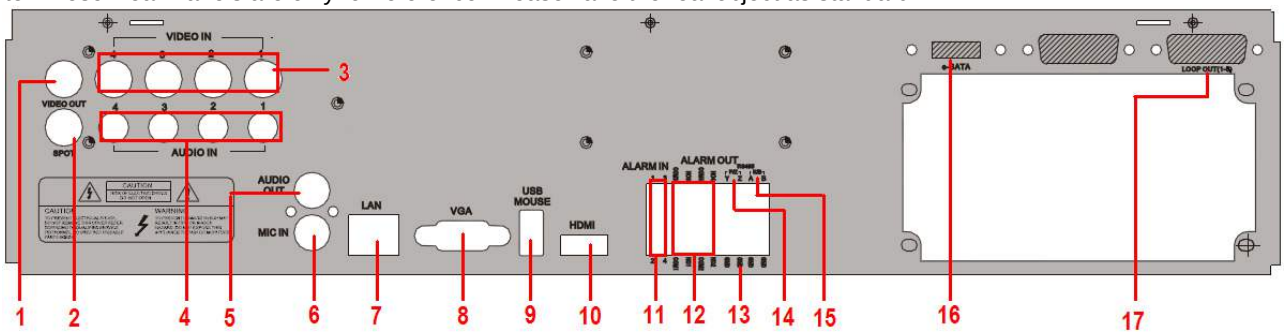


Fig 2.1 Rear Panel for 4-CH

Item	Name	Description
1	Video out	Connect to monitor
2	Spot	Connect to monitor as an AUX output to display channel by channel. Video would be displayed without OSD.
3	Video in	Video input channels from 1-4
4	Audio in	4 CH Audio input
5	Audio out	Audio output, connect to the sound box
6	MIC IN	Talk
7	LAN	Network port
8	VGA port	VGA output, connect to monitor
9	USB Mouse port	Connect to USB mouse
10	HDMI port	Connect to high-definition display device
11	ALARM IN	Connect to external sensor1-4
12	ALARM OUT	4 CH relay output. Connect to external alarm.
13	GND	Grounding
14	P/Z	Connect to Speed Dome, Y is TX+, Z is TX-

Item	Name	Description
15	K/B	Connect to Keyboard, A is TX+, B is TX-
16	E-SATA	Connect to HDD for backup
17	LOOP OUT	For outputting 1-4 CH image independently

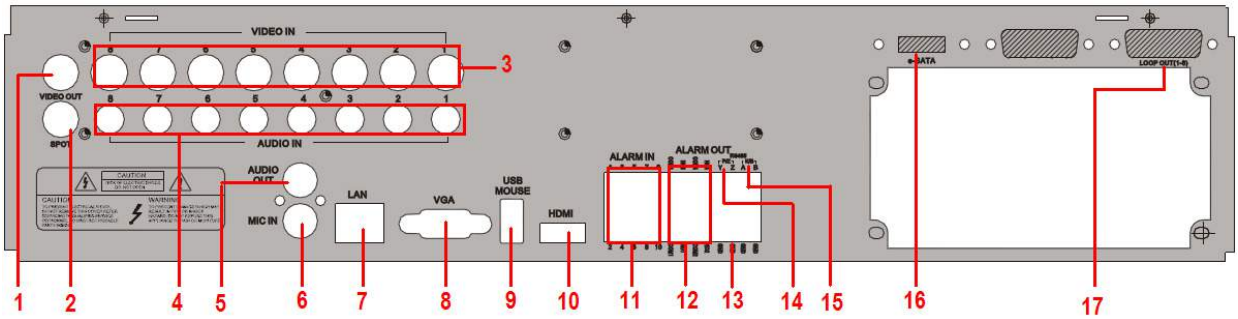


Fig 2.2 Rear Panel for 8-CH

Item	Name	Description
1	Video out	Connect to monitor
2	Spot	Connect to monitor as an AUX output to display channel by channel. Video would be displayed without OSD.
3	Video in	Video input channels from 1-8
4	Audio in	8 CH Audio input
5	Audio out	Audio output, connect to the sound box
6	MIC IN	Talk
7	LAN	Network port
8	VGA port	VGA output, connect to monitor
9	USB Mouse port	Connect to USB mouse
10	HDMI port	Connect to high-definition display device

Item	Name	Description
11	ALARM IN	Connect to external sensor1-8
12	ALARM OUT	4 CH relay output. Connect to external alarm.
13	GND	Grounding
14	P/Z	Connect to Speed Dome, Y is TX+, Z is TX-
15	K/B	Connect to Keyboard, A is TX+, B is TX-
16	E-SATA	Connect to HDD for backup
17	LOOP OUT	For outputting 1-8 CH image independently

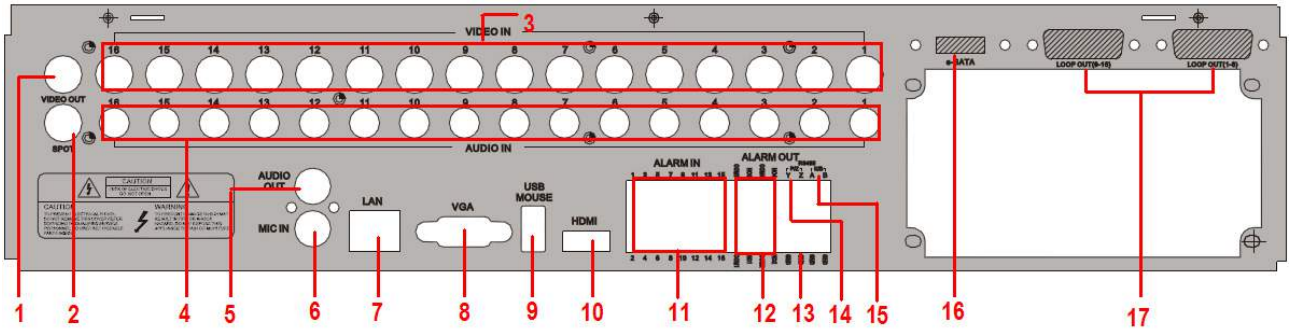


Fig 2.3 Rear Panel for 16-CH

Item	Name	Description
1	Video out	Connect to monitor
2	Spot	Connect to monitor as an AUX output to display channel by channel. Video would be displayed without OSD.
3	Video in	Video input channels from 1-16
4	Audio in	16 CH Audio input
5	Audio out	Audio output, connect to the sound box
6	MIC IN	Talk

Item	Name	Description
7	LAN	Network port
8	VGA port	VGA output, connect to monitor
9	USB Mouse port	Connect to USB mouse
10	HDMI port	Connect to high-definition display device
11	ALARM IN	Connect to external sensor1-16
12	ALARM OUT	4 CH relay output. Connect to external alarm.
13	GND	Grounding
14	P/Z	Connect to Speed Dome, Y is TX+, Z is TX-
15	K/B	Connect to Keyboard, A is TX+, B is TX-
16	E-SATA	Connect to HDD for backup
17	LOOP OUT	For outputting 1-16 CH image independently

2.4 Remote Controller

It uses two AAA size batteries.

- Open the battery cover of the Remote Controller.
- Place batteries. Please take care of the polarity (+ and -).
- Replace the battery cover.

Note: Key points to check in case the remote doesn't work.

1. Check batteries polarity.
2. Check the remaining charge in the batteries.
3. Check IR controller sensor for any masking.
4. Check the ID of the remote controller with respect to the DVR.

If it still doesn't work, please try using a good known remote, or contact your dealer.

The interface of remote controller is shown in Fig 2.4 Remote Controller.

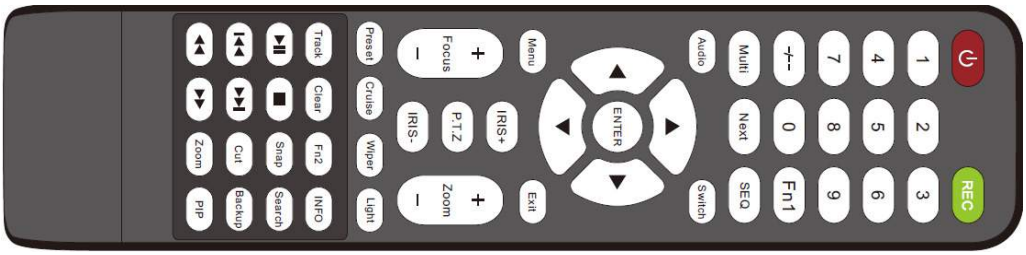


Fig 2.4Remote Controller

Button	Function
Power Button	Switch off—to stop DVR. Use it before turning off the power
Record Button	To record manually
-/-- /0-9 Digital Button	Input number or choose camera
Fn1 Button	Unavailable temporarily
Multi Button	To choose multi screen display mode
Next Button	To switch the live image
SEQ	To enter into auto dwell mode
Audio	To enable audio output in live mode
Switch	To switch the output between BNC and VGA
Direction button	To move cursor in setup or pan/title PTZ
Enter Button	To confirm the choice or setup
Menu Button	To enter into menu
Exit Button	To exit the current interface
Focus/IRIS/Zoom/PTZ	To control PTZ camera. Move camera/zoom/IRIS/Focus
Preset Button	To enter into preset setting in PTZ mode
Cruise Button	To enter into cruise setting in PTZ mode

Track Button	To enter into track setting in PTZ mode
Wiper Button	To enable wiper function in PTZ mode
Light Button	To enable light function in PTZ mode
Clear Button	To return to the previous interface
Fn2 Button	Unavailable temporarily
Info Button	Get information about DVR like firmware version, HDD information
	To control playback. Play/Pause/Stop/Previous Section/Next Section/Rewind/Fast Forward
Snap Button	To take snapshots manually
Search Button	To enter into search mode
Cut Button	To set the start/end time for backup in playback mode
Backup Button	To enter into backup mode
Zoom Button	To zoom in the images
PIP Button	To enter into picture in picture setting mode

Note: You shall press P.T.Z button to enter into PTZ setting mode, choose a channel and press P.T.Z button again to hide the P.T.Z control panel. Then you can press preset, cruise, track, wiper or light button to enable the relevant function.

Operation processes with remote controller to control multi-DVR

The default device ID of the DVR is 0. It's not necessary to reset the device ID when a remote is to be used to control a single DVR. However when controlling multiple DVRs with multiple remote controllers, you would need to configure the device ID. Please refer to below steps:

- Activate remote controller to control the DVR: Turn the IR sensor of the remote controller towards the IR receiver on the front panel, press the number key 8 twice on the remote, then input device ID of the DVR to be controlled (Range from: 0-65535; the default device ID is 0) and press ENTER to confirm.

You can check the device ID of a DVR from System Setup→Basic→Device ID. You can also set multiple DVRs with the same device ID. However this can cause interference if the DVRs are kept close to each other.

2.5 Control with Mouse Control

2.5.1 Connect Mouse

It supports USB mouse through the ports on the rear panel.

Notice: **If mouse is not detected or doesn't work, check below steps:**

1. Make sure the mouse is plugged in the USB mouse port not the USB port on the front panel.
2. Try with a good mouse that work on a PC.

2.5.2 Use Mouse

During live:

Double-click on any camera window for the full screen mode. Double-click again to return to the previous screen mode.
Right click to reveal the control menu on the screen. Right click to hide the control menu.

In Configuration:

Click to enter a particular option. Right click to cancel the option or to return to the previous menu. In order to input a value in a particular screen, move cursor to the input box and click. An input window will appear as Fig 2.5. It supports digits, alphabets and symbols as inputs. Click Shift button to input Capital letters and symbols; click Shift button again to return.
You can change some values using the mouse wheel, such as time. Move cursor onto the value and roll the wheel when the value blinks.

Fig 2.5 Digital Numbers and Letters Input Window

It supports mouse drag. For e.g. setting up motion detection area, click customized, hold down the left button and drag to set motion detection area.

Setting up Schedule: hold left button and drag to set schedule time.

In Playback:
Click to choose the options. Right click to return to live mode.

In Backup:
Click to choose the options. Right click to return to previous picture.

In PTZ Control:
Click left button to choose the buttons to control the PTZ. Click right button to return to live.

Note: Mouse is the default tool for all operations unless an exception, as indicated.

3 Basic Function Instruction

3.1 Startup & Shutdown

Please make sure all the connections are done properly before you power on the unit. Proper startup and shutdown are crucial to expand the life of your DVR.

3.1.1 Startup

Step1: Connect with the source power.

Step2: The device will boot and the power LED would turn blue.

Step3 A WIZZARD window will pop up and show some information about time zone，time setup，network configuration, record configuration and disk management. User can setup here and refer to the concrete setup steps from the corresponding chapters. If users don't want to setup Wizard, please click Exit button to exit.

Note: This DVR can only display options on either VGA/HDMI monitor or CVBS monitor at a given point of time. If there is live image display without menu options then please check if there is display on other device/monitor, or long press Exit key to wait for login dialog box to appear. Long press Exit key can switch the output between CVBS and VGA/HDMI.

3.1.2 Shutdown

You can shut down the device by using IR remote controller and mouse.

By IR remote controller:

Step1: Press Power button. This will bring up a shutdown window. The unit will shut down by clicking "OK" button.

Step2: Disconnect the power

By mouse:

Step1: Enter into Menu and select "Shut Down" icon. This will take you to the shutdown window.

Step2: Click OK. Then, the unit will power off after a while.

Step3: Disconnect the power

3.2 Login

User can login or log off the DVR system. Once logged off, the user cannot do any other operation except changing the multi-screen display.

Notice: The default user name and password is “admin” and 123456”

For complete operational steps for changing password, adding or deleting users，please refer to section 4.7 User Management Configuration.

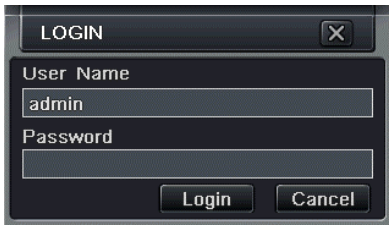


Fig 3-1 Login

3.3 Live Preview

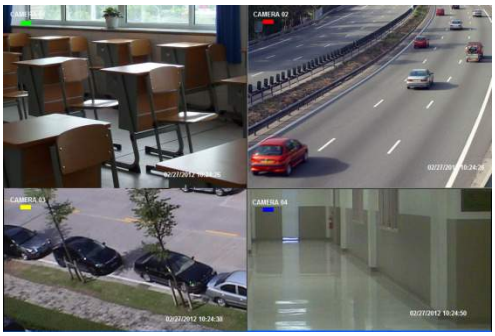


Fig 3-2 Live Preview Interface

Symbol	Meaning
Green	Manual record
Yellow	Motion detection record
Red	Sensor Alarm record
Blue	Schedule record

3.4 Live Playback

Click Play button to play the record. Refer to Figure 3-3. User can do complete operation by clicking the buttons on screen.

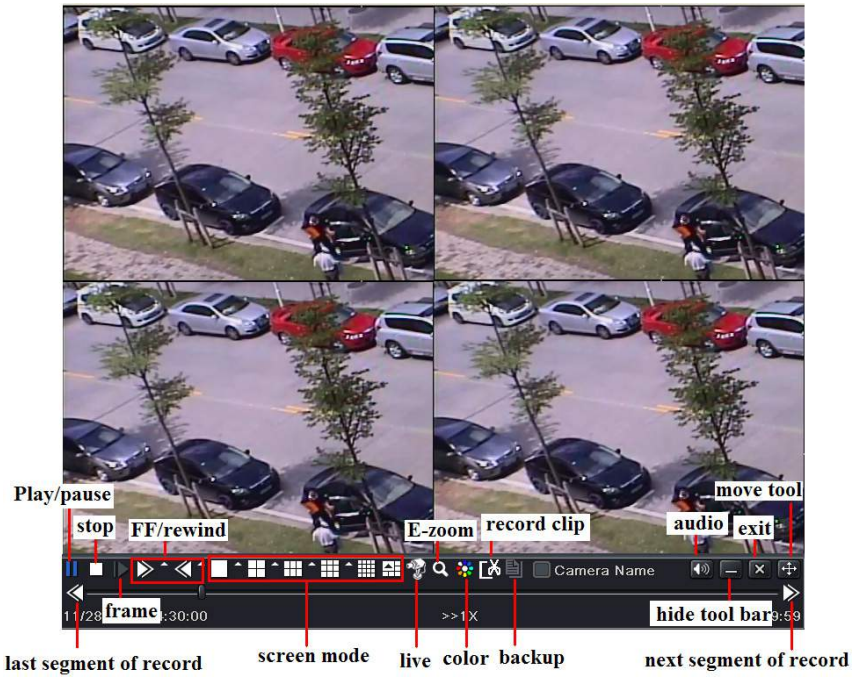


Fig 3-3 Live Playback

4 Main Menu Setup Guide

Click right mouse or press Exit button on the front panel to display the menu toolbar at the bottom of the screen. Refer to Fig 4-1:

Fig 4-1 Menu Toolbar

Click the icon beside the screen display mode to display a channel select dialog. Images can drag to any place to display in the live interface. Click the icon beside the playback icon to select the time to playback. For example, if 2 minutes is selected and then click playback button, it will start to playback from the past 2 minutes.

Dwell: Dwell means to display live images from different cameras in a sequence. The images may be displayed as a single channel or in a grid fashion from different cameras. Dwell mode is enabled only when the chosen display mode is not able to display all the available cameras.

Color: If this button is enabled, you can adjust the color of live images.

E-Zoom: Single channel large screen electronic amplification.

Volume: Enable sound.

PTZ: Click the PTZ button to control rotation position, speed and auto scan of the PTZ connected to the IP camera.

Snap: Use this button to take snapshots. These pictures will automatically be saved in the HDD.

Record: Click this button to start/stop recording.

Playback: Click this button to playback the recorded files.

User can click button and drag it anywhere with the left mouse

Click Menu button to pop up a window as Fig 4-2; you can also press MENU button on the front panel or operate with remote controller to display the main menu. Clicking Setup icon will pop-up the configuration menu:

Fig 4-2 Main Menu

4.1 Basic Configuration

Basic configuration includes three sub menus: system, date & time and DST.

4.1.1 System

Fig 4-3 Basic Configuration-Basic

Step1: Enter into Menu→Setup→Basic→System. Refer to Fig 4-3:

Step2: In this interface you can setup the device name, device ID, video format, max network user, VGA resolution and language. The definitions for every parameters display as below:

Device Name: The name of the device as it may display on the client end or on CMS. This would help the user to recognize the device remotely.

Device ID: This ID is used to map the DVR with IR remote controller and speed dome cameras.

Video Format: Two modes: PAL and NTSC. User can select the video format according to the cameras being used.

Password Check: If enabled the user would need to input the user name and the password for performing corresponding operations.

Show System Time: If selected, will display the current time during live monitoring.

Max Online Users: To set the maximum number of concurrent user logins in the DVR.

Show wizard: If selected, the GUI would launch the startup wizard on every boot, allowing the user to do basic setup.
VGA resolution: The resolution of live display interface, ranges from: CVBS, VGA800*600, VGA1024*768, VGA1280*1024 and HDMI.
Note : Switching between HDMI/VGA and CVBS will change the menu output mode. Please connect to relevant monitor.
Language: To setup the menu language.

Note: After changing the language and video output, the device needs to login again.

Logout After (Minutes): You can setup the screen interval time (30s, 60s, 180s, 300s). If there is not any operation within the setting period, the device will auto logout and return to the login interface.
No Image When Logout: If selected, there will be no image showing when logout.

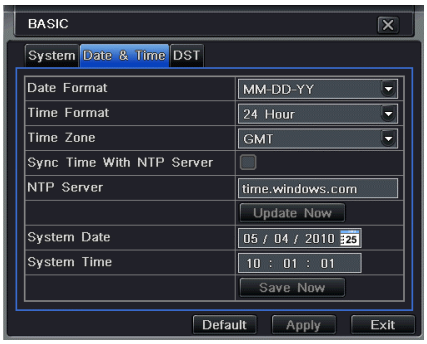


Fig 4-4 Basic Configuration-Date &Time

4.1.2 Date & Time

Step1: Enter into Menu→Setup→Basic→Date & Time tab. Refer to Fig 4-4:
Step2: Set the date format, time format, time zone in this interface; checkmark “sync time with NTP server” to refresh NTP server date; user can also adjust system date manually
Step3: Click “Default” button to restore default setting; Click “Apply” button to save the setting; click “Exit” button to exit the current interface.

4.1.3 DST

Step1: Enter into Menu→Setup→Basic→DST interface. Refer to Fig 4-5:
Step2: In this interface, enable daylight saving time, time offset, mode, start & end month/week/date, etc.
Step3: Click “Default” button to restore default setting; Click “Apply” button to save the setting; click “Exit” button to exit the current interface.

Fig 4-5 Basic Configuration-DST

4.2 Live Configuration

Live configuration includes four submenus: live, main monitor, spot and mask.

4.2.1 Live

In this interface, user can setup camera name, adjust colors: brightness, hue, saturation and contrast.

Step1: Enter into Menu→Setup→Live→Live tab. Refer to Fig 4-6:

Fig 4-6 Live Configuration→Live

Fig 4-7 Live-Color Adjustment

Note: A soft keyboard will pop up by clicking the camera name. User can self-define the camera name.

Step2: For a particular camera/channel setting, please click “setting” button to see a window as Fig 4-7:

Step3: In this interface, user can adjust brightness, hue, saturation and contrast in live; Click “Default” button to restore default

setting, click “OK” button to save the setting.
Step4: Select “All” to setup all channels with the same parameters.

4.2.2 Main Monitor

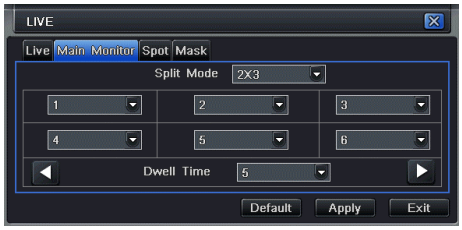


Fig 4-8 Live Configuration-Main Monitor

Step1: Enter into Menu→Setup→Live→Main Monitor tab. Refer to Fig 4-8:
Step2: Select split mode: 1×1, 2×2, 2×3, 3×3, 4×4 and channel. Click button to setup the previous channel group. Click button to set the latter channel group.
Step3: Set the dwell time.
Step4: Click “Default” to restore default setting; Click “Apply” to save the setting; click “Exit” to exit the current tab.

4.2.3 Spot

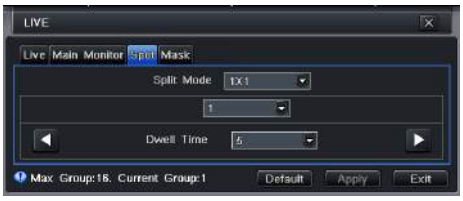


Fig 4-9 Live Configuration-Spot

Step1: Enter into Menu→Setup→Live→Spot tab. Refer to Fig 4-9:
Step2: Select split mode: 1×1 and map the channel
Step3: Set the dwell time.
Step4: Select the split mode and then setup current picture group. Click button to setup the previous channel groups of dwell picture. Click button to set the latter channel groups of dwell picture.
Step5: Click “Apply” button to save the setting; Click “Exit” button to exit the current tab.

4.2.4 Mask

You can setup private mask area on the live image picture. For a given channel a maximum of three areas can be masked.
Setup mask area: Click Setting button, enter into live image to press left mouse and drag mouse to set mask area. Please refer to the below picture. Right click to exit. Click Apply button to save the setting.
Delete mask area: Select a certain mask area and double click to delete that mask area. Then click Apply button to save the setting.

Fig 4-10 Live Configuration-Mask

Setup Mask Area

Live Image Mask Area

4.3 Record Configuration

Record configuration includes six sub menus: enable, record bit rate, time, recycle record, stamp and snap.

4.3.1 Enable

Step1: Enter into Menu→Setup→Record→Enable tab. Refer to Fig 4-11:

Fig 4-11 Record Configuration-Enable

Parameter	Meaning
Record	To enable/disable recording for the channel
Audio	To enable/disable audio recording for the channel

Step2: Checkmark record and audio.

Step3: Select All to setup the same settings for all channels.

4.3.2 Record Bitrate

Step1: Enter into Menu→Setup→Record→Record Bitrate tab. Refer to Fig 4-12:

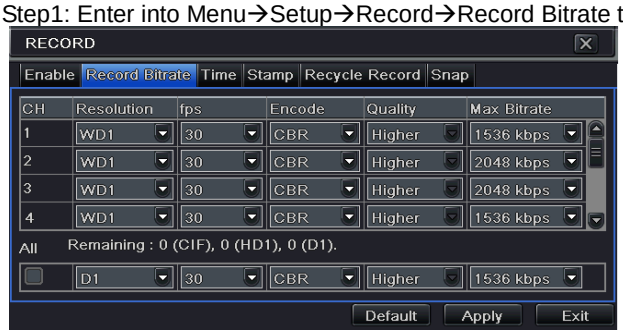


Fig 4-12 Record Configuration-Record Bit rate

Parameter	Meaning
Rate	Range from: 1-30（NTSC）1-25(PAL)
Resolution	Support CIF, HD1, D1 and WD1
Quality	The higher the value is, the clearer the recorded image is. Six options: lowest, lower, low, medium, higher and highest.
Encode	VBR and CBR
Max bit stream	Range from: 768kbps-2560kbps

Step2: Setup rate, resolution, quality, encode and max bit stream

Step3: Click “Default” button to restore default setting; Click “Apply” button to save the setting; click “Exit” button to exit the current interface.

4.3.3 Time

Step1: Enter into Menu→Setup→Record→Time tab. Refer to Fig 4-13:

Fig 4-13 Record Configuration-Time

Pre-alarm record time: The record time prior to actual triggering of an alarm i.e. record time before motion detection or a sensor alarm was triggered.

Post-alarm record: Set the post recording time after the alarm is finished, five options: 10s, 15s, 20s, 30s, 60s, 120s, 180s and 300s.

Expire time: The time till which the records would be retained. If the set date is overdue, the recorded files will be deleted automatically.

Step2: Select “All” to setup all channels with the same parameters.

Step3: Click “Apply” to save the setting; click “Exit” to exit the current interface.

4.3.4 Stamp

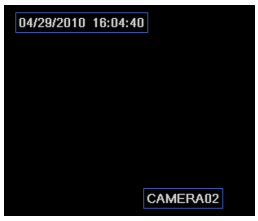
Stamp : This provides an option to enable or disable the Camera Name and the Time stamp on the video. You can also choose a position for the stamp on the screen**.**

Step1: Enter into Menu→Setup→Record→Stamp tab. Refer to Fig 4-14:

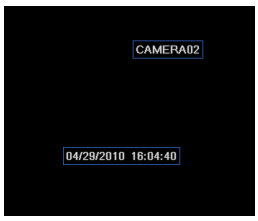
Step2: Checkmark camera name and time stamp; click Setting button. User can use cursor to drag the camera name and time stamp at random positions. Refer to below Figures:

Step3: Select “All” to setup all channels with the same parameters.

Fig 4-14 Record Configuration-Stamp



Before Drag



After Drag

4.3.5 Recycle Record

This option is used to recycle the HDD space once it is full. If enabled, the system will automatically delete the old records (FIFO, recycling space) and recycle the space if it is completely utilized. The setting steps are as follows:

Step1: Enter into Menu→Setup→Record→Recycle Record tab.

Step2: Checkmark the ‘recycle record’ box to activate the auto recycling.

Step3: Click “Apply” button to save the setting; click “Exit” button to exit the current interface.

Note: If the option is disabled or not selected, the DVR would stop recording once the HDD is full.

4.3.6 Snap

In this interface, user can set up Resolution, quality, snap interval, snap number.

4.4 Schedule Configuration

Schedule configuration includes three sub menus: schedule, motion and alarm.

4.4.1 Schedule

This tab allows defining schedule for normal recording for seven days of a week, 24 hours of a day. Every row denotes an hourly timeline for a day. Click the grid to do relevant setup. A highlighted area denotes selected timeline.

Step1: Enter into Menu→Setup→Schedule tab. Refer to Fig 4-15.

Step2: Select channel and double-click to pop up a window as Fig 4-16. Now you can edit week schedule:

Click “ ” button to add a certain day schedule; click “ ” button to delete the selected schedule;

Copy: Copy the specified schedule to other dates.

If you want to copy the schedule settings of a channel to other or all channels, you just need to select channel and click “Copy” button.

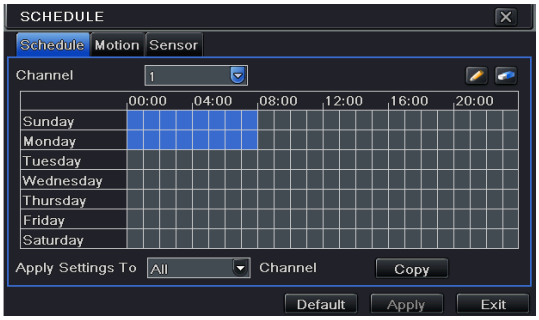


Fig 4-15 Schedule Configuration-Schedule

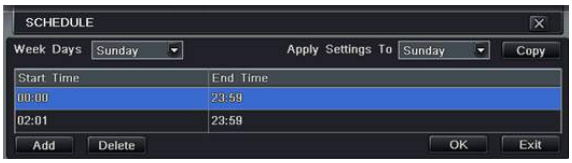


Fig 4-16 Schedule-Week Schedule

4.4.2 Motion

This tab allows to setup schedule for motion based recording.

Step1: Enter into Menu→Setup→Schedule→Motion tab. Refer to Fig 4-17:

Step2: The setup steps for schedule for motion based recording are similar to normal schedule setup. You can refer to 4.4.1 Schedule for details.

Note: The default schedule of motion based recording is 24x7, that is, the color of schedule settings interface is dark blue. This enables motion based recording for 24x7. If you want to activate motion based recording, you must enable motion alarm and setup schedule for motion alarm (Refer to Chapter 4.5.2 Motion Alarm for more details).

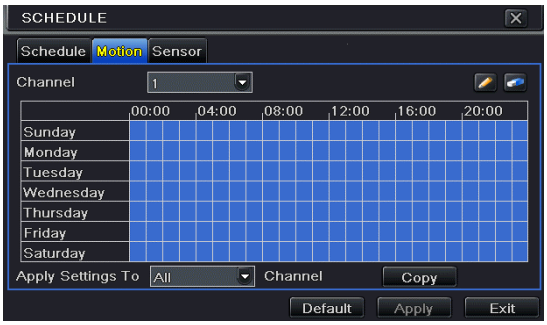


Fig 4-17 Schedule Configuration-Motion

4.4.3 Sensor

This tab allows to setup schedule for sensor based recording.

Step1: Enter into Menu→Setup→Schedule→Sensor tab. Refer to Fig 4-18:

Step2: The setup steps for schedule for sensor based recording are similar to normal schedule setup (Refer to 4.4.1 Schedule for details).

Note: The default schedule of sensor based recording is 24x7, that is, the color of schedule settings interface is dark blue. This enables sensor based recording for 24x7. If you want to activate sensor based recording, you must enable sensor alarm and setup schedule for sensor alarm (Refer to Chapter 4.5.1 for more details).

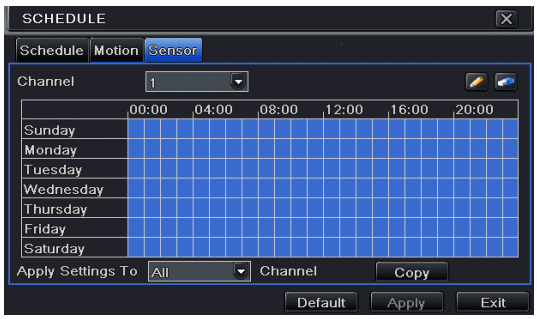


Fig 4-18 Schedule Configuration-Sensor

4.5 Alarm Configuration

Alarm configuration includes five sub menus: sensor, motion, video loss, other alarm and alarm out.

4.5.1 Sensor

Sensor includes three sub menus: basic, alarm handling and schedule.

Operate the following steps to configure sensor alarm:

Step1: Enter into Menu→Setup→Alarm→Sensor→Basic tab. Refer to Fig 4-19:

Step2: Enable channels by checking the checkboxes beside the desired channels.

Step 3: Set the alarm type according to triggered alarm type. Two option: NO and NC.

Step4: Click “Apply” button to save settings.

Step5: Enter into Alarm Handling tab. Refer to Fig 4-20.

Fig 4-19 Alarm Configuration-Sensor-Basic

Select hold time and then click Setting button. A dialog box will pop-up as Fig 4-21:

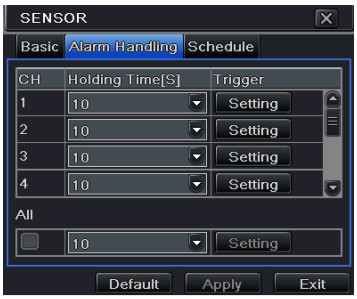


Fig 4-20 Alarm Configuration-Sensor-Alarm Handling

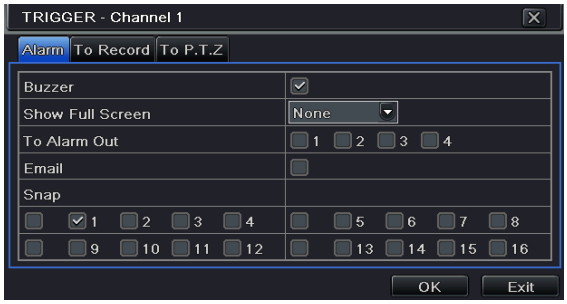


Fig 4-21 Alarm Handling-Trigger

Step 6: Enter into alarm tab to select the options to handle alarm.

Buzzer: If selected, the local inbuilt buzzer would be activated on an alarm.

Full screen alarm: If selected, there will pop up the chosen channel on the monitor on an alarm trigger.

To alarm out: If selected, this would trigger the external relay output on detecting a sensor based alarm.

Email: If you select this option, the DVR will send an email alert to the preconfigured email address in case of a sensor based alarm from the particular input.

Snap: If selected, the system will snap images of the checked channels on an alarm and save them in the HDD automatically.

Step 7**:** Enter into To Record tab. Select recoding channels. It would be recorded in case of an alarm. Click OK button to save the setting.

Step 8: Enter into To PTZ tab. Set preset, cruise and track options for a PTZ in case of a sensor based alarm. Single or multiple PTZ units could be programmed to perform this function on the same alarm.

Step9: Enter into Schedule tab. Refer to Fig 4-22. The setup steps for schedule for sensor based alarm are similar to normal schedule setup. You can refer to Chapter 4.4.1 Schedule for more details. This step is very important for sensor alarm. Even if you have enabled the sensor alarm for all channels and setup the trigger, you will not see the result of sensor alarm if no schedule is added.

If you have set the schedule for senor based recording in the same timeline, recordings can also be triggered.

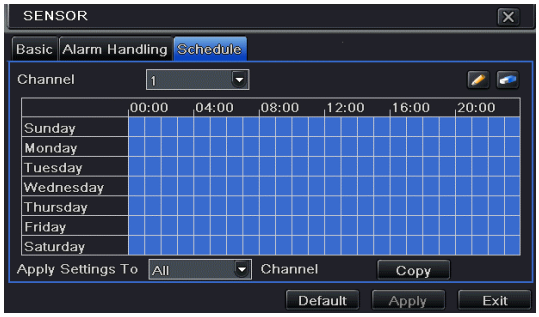


Fig 4-22 Sensor-Schedule

4.5.2 Motion

Motion includes two sub menus: motion and schedule.

The steps to set up motion alarm are as follows:

Step1: Enter into Menu→Setup→Alarm→Motion tab. Refer to Fig 4-23:

Fig 4-23 Alarm Configuration-Motion

Step2: Enable motion alarm, set alarm hold time which refers to the time till which the system will wait for further detection of motion. Eg. If the holding time is set to 10 seconds, once the system detects a motion, it will go into alarm but would not detect any other motion alarm (specific to channel) until 30 seconds. If there is other motion detected during this period, it is

considered it as continuous movement. Otherwise, it will be considered as a single motion.

Step3: The setup steps of motion trigger are similar to 'Alarm Handling'. You can refer to Chapter 4.5.1 Sensor →Alarm Handling for more details.

Step4: Click "Setting" button under the Area to display the following picture as shown in Fig 4-24:

Step5: In the Area tab, you can drag slide bar to set the sensitivity value (1-8). The higher the value is the more sensitive it is to motion. Since the sensitivity is influenced by color and time (day or night), you can adjust its value according to the practical conditions. Left click the grid and drag to delete area. Drag again to add area. Click icon to set the whole area as detection area. Click icon to clear the set detection area. Click icon to test the sensitivity as per the local conditions. Once motion is sensed, it displays a figure icon. Click icon to save the setting. Click icon to exit the current interface.

Fig 4-24 Motion-Area

Note: Prior to setting motion detection field, it is recommended that you click icon to clear the existing field and set afresh.

Step6: Select "All" to setup all channels with the same parameters.

Step7: Click "Apply" button to save the setting.

Step 8: Enter into Schedule tab. The setup steps for schedule for motion based alarm are similar to normal schedule setup; you can refer to 4.4.1 Schedule for details.

This step is very important for motion based alarm. Even if you have enabled the motion based alarm for all channels and setup the trigger, you will not see the result of motion based alarm if no schedule is added.

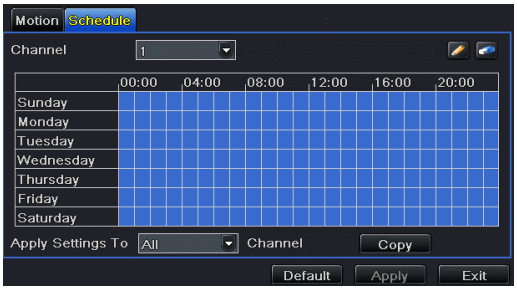


Fig 4-25 Motion-Schedule

If you have set the schedule for senor based recording in the same timeline, recordings can also be triggered.

4.5.3 Video Loss

Step1: Enter into Menu→Setup→Alarm→Video Loss tab. Refer to Fig 4-26:
Step2: The setup steps of video loss trigger are similar to alarm handling. You can refer to Chapter 4.5.1 Sensor →alarm handling for more details.
Step3: Click “Apply” button to save the setting; click “Exit” button to exit the current interface.

Fig 4-26 Video Loss

4.5.4 Other Alarm

This tab gives a choice to configure alarm for Disk Full, IP Conflict, the Disconnect event, Disk Attenuation or Disk Lost.
Step1: Enter into Menu→Setup→Other alarm tab. Refer to Fig 4-27:
Step 2: Use the dropdown menu and select the event or the alarm.
Step 3: Check the required trigger options.
If the selected event is “Disk Full”, then use the drop down box for “Disk Shortage Alarm” to choose a threshold value for remaining HDD space. If the threshold value is reached, the system will trigger the Disk Full Alarm.
Click “Apply” to save settings; Click “Exit” to exit the current interface

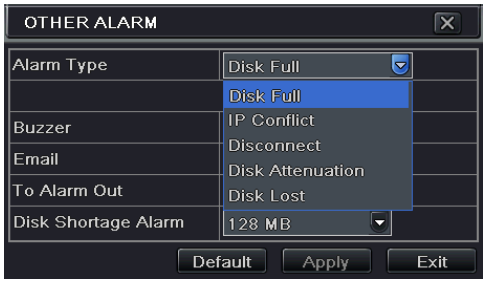
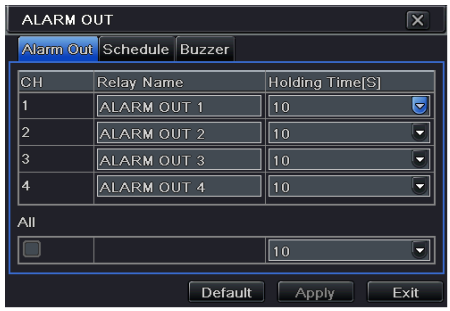


Fig 4-27 Other Alarm

4.5.5 Alarm Out

Alarm out includes three sub menus: alarm out, schedule and buzzer
To setup alarm out:
Step 1: Enter into Menu→Setup→Alarm out tab. Refer to Fig 4-28. Input relay name and hold time.



Step 2: Select the Schedule tab. This will bring up the schedule setup interface. The setup steps for schedule for alarm out are similar to normal schedule setup; you can refer to 4.4.1 Schedule for details.
This step is very important for alarm out. Even if you have enabled alarm out in the motion based alarm or sensor based alarm, you will not see the result of alarm out if no schedule is added here.

Buzzer

It is an inbuilt alarm output device. To setup Buzzer:

Step1: Enter into Menu→Setup→Alarm out →Buzzer tab;

Step2: Checkmark Buzzer and set buzzer alarm hold time. This would trigger the buzzer when the system is in alarm.

Fig 4-28 Alarm Out

4.6 Network Configuration

Network configuration includes five submenus: network, sub stream, Email, server and other settings. Network settings must be configured if DVR is used for monitoring over network.

4.6.1 Network

Step 1: Enter into Menu→Setup→Network→network tab. Refer to Fig4-29:

Step 2: HTTP port: the default value is 80. If the value changed, you need to modify the IP address in the IE address .i.e. if HTTP port is set to 82 and IP address is, 192.168.0.25, then you shall input IP address as http://192.168.0.25:82 in IE browser.

Server port: Communication port.

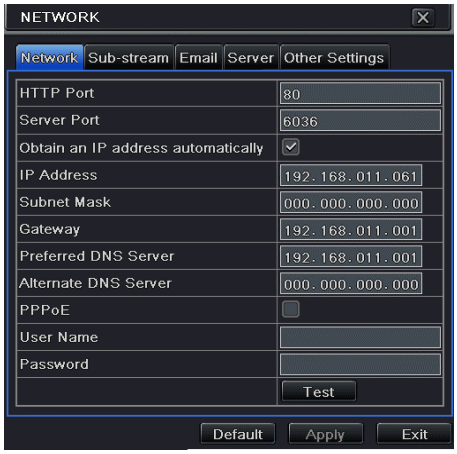


Fig 4-29 Network Configuration-Network

Step 3: Connect Internet. If you have a DHCP server running and would like your DVR to automatically obtain an IP address and other network settings from that server, check the checkbox beside "Obtain an IP address automatically". Then the device will distribute IP address, subnet mask, and gateway IP and DNS server. If you want to configure your own settings, please input the IP address, Subnet mask, Gateway DNS server manually. You can also check the PPOE checkbox to enable this feature and then enter username and password. Once the setup is completed, your DVR will automatically dial up into your network.

Step 4: No matter what kinds of way to connect Internet, you should test the effectiveness of the network by clicking “Test” button after you setup the network.
Step 5: If the network is well connected, please click “Apply” button to save settings.

4.6.2 Sub-stream

Step 1: Enter into Menu→Setup→Network →Sub-stream tab. Refer to Fig 4-30:
Step 2: Select fps, resolution, quality, encode and max bit rate
Step 3: Select “All” to setup all channels with the same parameters.

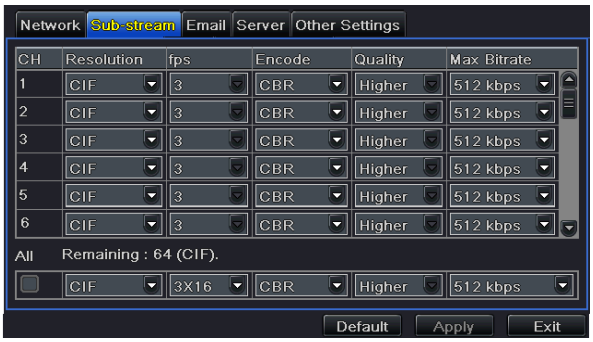
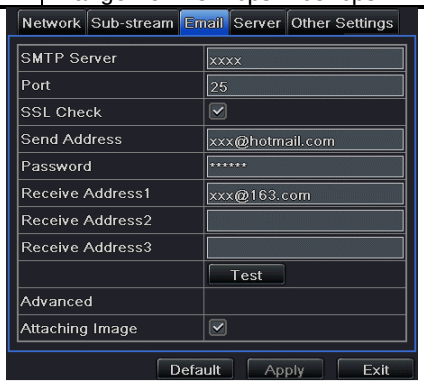


Fig 4-30 Network Configuration-Sub Stream

Parameter	Meaning
Resolution	Support CIF
FPS	Range from: 1-25(PAL) /1-30(NTSC)
Encode	Two options: VBR and CBR
Quality	The higher the value is, the clearer the record image. Six options: lowest, lower, low, medium, higher and highest.
Max Bitrate	Range from: 32kbps~768kbps

4.6.3 Email

Step 1: Enter into Menu→Setup→Network→Email tab. Refer to Fig 4-31:
SMTP Server/Port: The name and port number of SMTP server. Check the SSL checkbox if the server requires a secure connection (SSL); user can setup mail servers (such as Gmail) as required.
Send address/password: Sender’s email address/password



Receive address: Receiver's email address. Here user can add at least three mail addresses. Click TEST button to test the validity of the mailbox.
Attaching image: After selecting it, the system will attach images when sending the emails.

Fig 4-31 Network Configuration-Email

4.6.4 Server

This function is mainly used for connecting ECMS. The setting steps are as follows:
Step 1: In the server tab, select "enable" as shown in the Fig 4-32.
Step 2: Check the IP address and port of the transfer media server in the ECMS. The default server port for auto report is 2009. If it is modified, please enter into the transfer media interface to check.
Step 3: Enable the auto report in the ECMS when adding a new device. Then input the remaining information of the device in the ECMS. After that, the system will auto allot a Device ID. Please check it in the ECMS.
Step 4: Input the above-mentioned server IP, server port and device ID in the server interface .Then click "Apply" button to save settings. Now, the ECMS system will automatically connect this device.

Fig 4-32 Network Configuration-Server

4.7 User Management Configuration

This tab allows you to add normal or advanced users. To add user and setup user authority:
Step 1: Enter into Menu→Setup→User management configuration. Refer to Fig 4-34:
Step 2: Click Add button to display a dialog box as Fig 4-35:
Step 3: In General tab, input username, password and select user type. You can also check 'Binding PC MAC Address' and input this address.
Step 4: Click 'OK' button to save settings.

Note: When the default value of binding PC MAC address is 0, the user is not bound with the specified computer. If the bind option is used, the user would be able to log into the DVR only through the specific computer (carrying the MAC address).

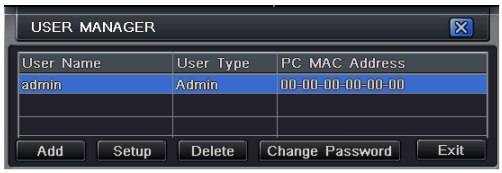


Fig 4-34 User Management Configuration

Fig 4-35 Add-General

Step 5: Select Authority tab and then assign the operation rights for particular user. Refer to fig 4-36.

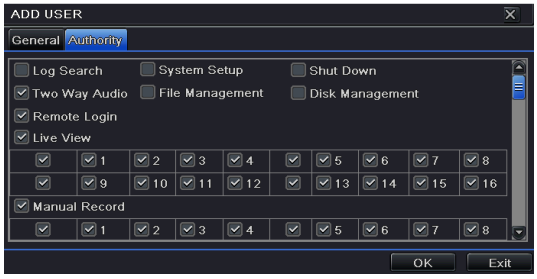


Fig 4-36 Add User-Authority

If you want to delete the user, please select the user you want to delete in the user list box and then click “Delete” button.

If you want to modify the user, please select the user you want to modify in the user list box and then click “Setup” button to modify its general information and authority.

If you want to change password of a user, please select the user in the user list box and then click “Change Password” button.

4.8 P.T.Z Configuration

P.T.Z configuration includes two submenus: serial port and advanced settings.

Serial port settings are as follows:

Step 1: Enter into Menu→Setup → P.T.Z →Serial port tab. Refer to Fig 4-37:

Step 2: Select “enable” and setup the value of address, baud rate and protocol according to the settings of the speed dome.

Step 3: Configure all channels with the same parameters by selecting the “All” box and then doing the relevant setup.

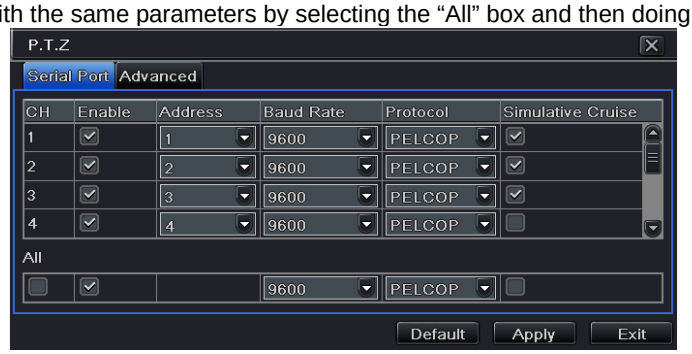


Fig 4-37 P.T.Z Configuration-Serial Port

Definitions and descriptions of network stream:

Parameter	Meaning
Address	The address of the PTZ device
Baud rate	Baud rate of the PTZ device. Range form: 110, 300, 600, 1200, 2400, 4800, 9600, 19200, 34800, 57600, 115200, 230400, 460800, 921600.
Protocol	Communication protocol of the PTZ device. Range from: NULL, PELCOP, PELCOD, LILIN, MINKING, NEON, STAR, VIDO, DSCP, VISCA, SAMSUNG, RM110, HY, N-control.
Simulative Cruise	If enabled, no matter whether the PTZ device supports cruise or not, the presets will cruise.

Advanced settings are as follows:

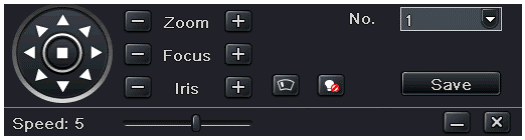
Step 1: Enter into Menu→Setup→ P.T.Z →Advanced tab. Refer to Fig 4-38:

Step 2: In the Advanced tab, click preset “Setting” button to see a dialog box as Fig 4-39:

Fig 4-38 P.T.Z Configuration-Advanced

Fig 4-39 Advanced-Preset

Step 3: In the preset setting tab, while clicking Setting button, a dialog will pop-up as Fig 4-40:



- User can control the dome by rotating up, down, left, right and adjust the rotating speed zoom, focus and iris of the dome;
- Select the serial number of the preset point. Click button to

enable the PTZ wiper and click button to enable the PTZ light.

Note: PTZ must support wiper and light and these two buttons are just available when selecting PELCOP or PELCOD.

- Click Save button to save the settings, click icon to hide the tool bar, right click to view the toolbar again; click icon to exit the current interface.
- In the preset interface, click OK button to save the setting; click Exit button to exit the current interface.

Step4: In the Advanced tab, while clicking cruise “Setting” button, a dialog box will pop-up as Fig 4-41:

Fig 4-40 Preset Setting

Fig 4-41 Cruise Setting

- Click Add button to add cruise line in the list box (max 8 cruise line can be added); select a cruise line and click Setup button to see a dialog box as Fig 4-42:
- Click Add icon to set the speed and time of preset point; select a preset point and then click Delete icon to delete that preset point; click Modify icon to modify the setting of a preset point. User can click icons to adjust the position of preset point. Click Preview button to preview the cruise line; click OK button to save the setting; click Exit button to exit the current interface.
- Select a preset point in the cruise line list box. Click Delete button to delete that cruise line; click Clear all button to clear all cruise line from the list box; click OK button to save the setting; click Exit button to exit the current interface.

Step5: In the Advanced tab, while clicking track “Setting” button, a dialog box will pop-up as Fig 4-43:

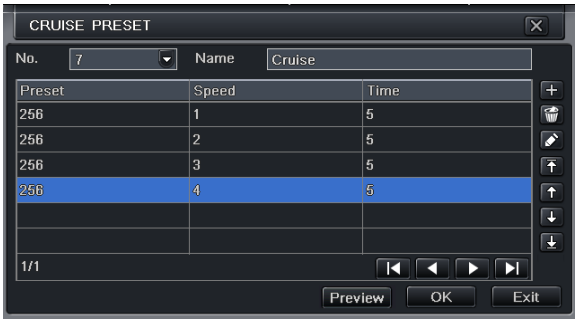


Fig 4-42 Cruise Setting-Modify Cruise Line

Fig 4-43 Track Setting

- User can control the dome by rotating up, down, right, left and can adjust the rotating speed and zoom, focus and iris of the dome; click Start Record button and move the PTZ in the required manner to record by the DVR. Click this button again can stop recording. Click Start track button to play recorded track. Click this button again can stop the playback.
- Click icon to hide the tool bar and right click to view the toolbar again. Click icon to exit the current tab.

Step 6: After the completion of settings, click “Apply” button to save settings.

4.9 Advanced

Advanced configuration includes three submenus: Reset, Import/Export and Block/Allow list.

4.9.1 Reset

This would reset the system to factory defaults and reboot the DVR.

4.9.2 Import/Export

User can export the data files into mobile storage devices as backup and can also import specified data files from mobile storage device to DVR.

4.9.3 Block/Allow list

Fig 4-44 Block/Allow List

Here authorized user can prohibit computer users within a certain IP address range from accessing DVR or allow computer

users within a certain IP address range to access DVR. For example, if an admin don’t want computer users within IP address range from 196.168.000.002 to 196.168.000.004 to access the DVR, he can checkmark ‘Block list’ option, and then input such IP address range. If it is required that computer users within a certain IP address range access DVR, they can checkmark “Allow list option”, and then do the required configuration.

5 Search, Playback & Backup

Search configuration includes four submenus: Time Search, Event Search, File Management and Snap.

5.1 Time Search

Step1: Enter into Menu→Search →Time search tab. Refer to Fig 5-1:

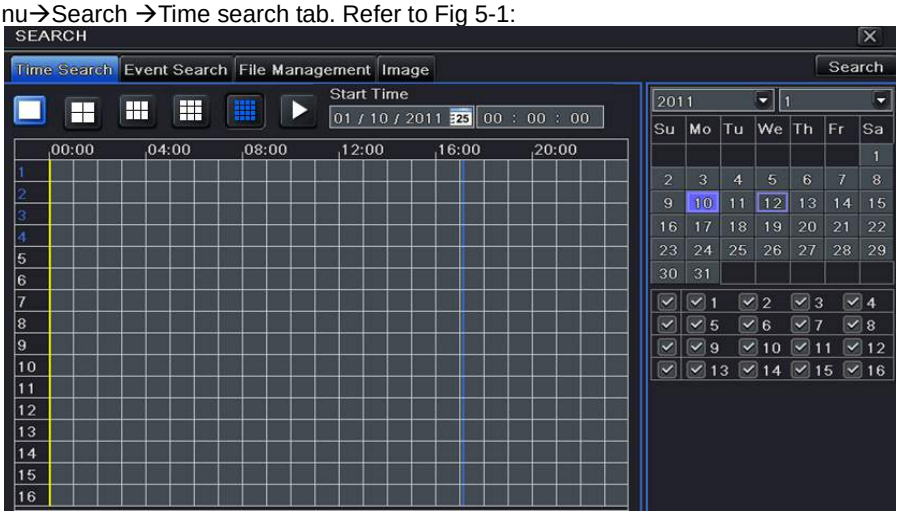
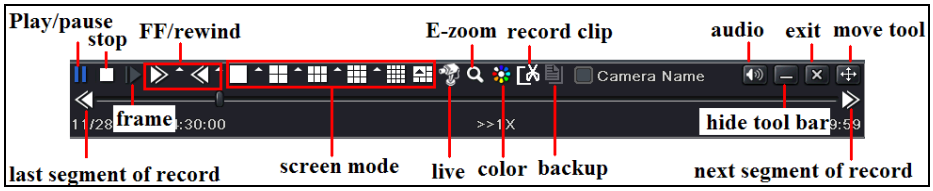


Fig 5-1 Search configuration-time search

Step2: Select date and channels on the right hand side and press “Search” button. A date with highlighted borderline indicates presence of data.

Step3: Set the start time by clicking a particular grid or by entering the specific value in the start time field.

Step4: Select the channel display mode and click button to play record. Use the playback toolbar to control the playback.



Playback buttons

Note: When the monitor resolution is set to VGA800*600, Part of the time search interface will be hidden. Click the "Expand to" button to expand the whole interface.

Click button to select channels to show live images in the playback interface. Only four channels at most can be selected to display live images.

The method of record backup during a certain period in the playback interface:

Select the start time by dragging the slider and click icon. Then, select the end time and click this icon again to confirm the record period. Next, click icon to backup the record during this period.

5.2 Event Search

Step1: Enter into Menu→Search→Event Search tab. Refer to Fig 5-2:

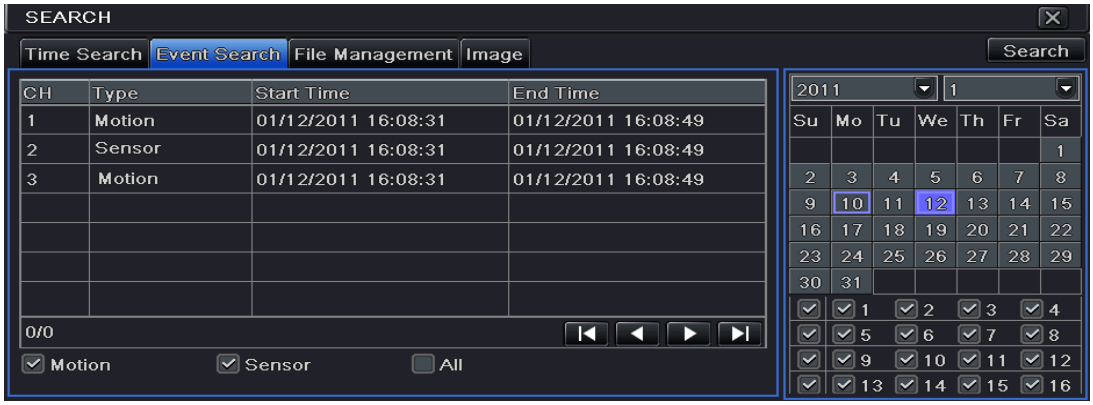


Fig 5-2 Search Configuration-Event Search

Step 2: Select date and channels on the right hand side. A data with highlighted borderline indicates presence of data.

Step 3: Then checkmark Motion, Sensor or All accordingly. You can search for motion based recording and sensor based recording.

Step 4: Press “Search” button to display the searched event information in the event list box.

Step 5: Double click the event item to play the record.

5.3 File Management

Step1: Enter into Menu→Search→File Management tab. Refer to Fig 5-3:

Step 2: Select date and channels. The date with highlighted borderline indicates presence of data.

Step 3: Press “Search” button to display the searched files in the file list box.

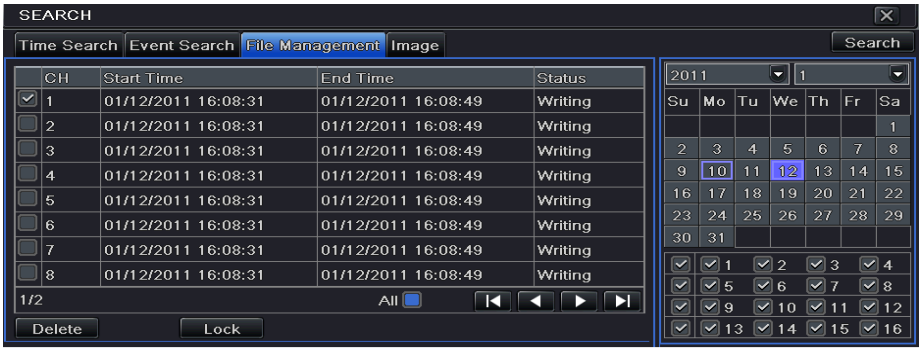


Fig 5-3 Search Configuration-File Management

Lock: Select a file and click Lock button to lock this file. Once locked, the file cannot be deleted.

Unlock: Select a locked file and click Lock button to unlock this file

Delete: Select an unlocked file and click Delete button to delete this file.

Step 4: Use “All” button to lock/unlock or delete all files in the file management column.

Step 5: Double click an unlocked item to playback.

5.4 Search by Image

Step 1: Enter into Menu→Search→Image tab.

Step 2: Select data and channels on the right hand side.

Step 3: Press “Search” button to search for a recorded image.

Step 4: Once an alarm image has been identified, the user can double click the image to play the recording.

You can lock the image by clicking “Lock” button. Click “Save” button to copy the image on the HDD. Click “Save All” to copy all images on the HDD.

Note: In order to take images on alarm, the snapshot feature should be activated in “Alarm Handling” for different kind of alarms. Please refer to 4.5 Alarm Configuration for details.

5.5 Backup

This unit supports backup by built-in SATA DVD Writer or USB flash drive. User also can make backup by IE browser via internet. Refer to 7.3.2 Remote backup.

Step 1: Enter into main menu → Backup interface. Refer to Fig 5-4:

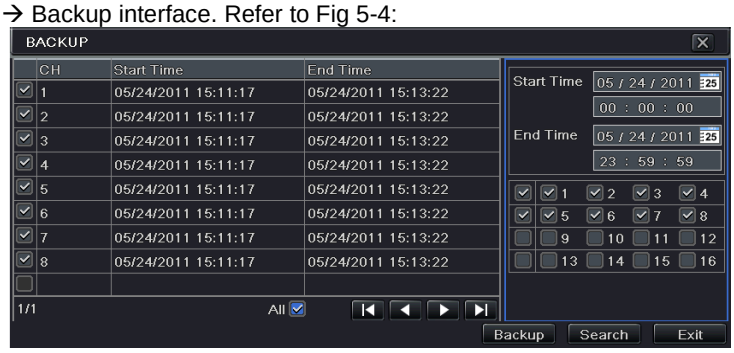


Fig 5-4 Backup Configuration

Step 2: Set the start & end time, select channels and click Search button to display the searched data in the data backup list box

Step 3: Select a required file or checkmark “All” to select all data files. Click Backup button to display Backup information window.

Step 4: In the backup information interface, user can check the relevant options for backing up files. These options include storage Media, backup player and save file type. Then click Start button to start backup.

Note : If the backup files are saved in DVR format, please check backup player. Only this player can play these files in DVR format. If the backup files are saved in AVI format, you can play these files with common media player.

6 Manage DVR

6.1 Check System Information

Check system information includes five submenus: system, event, log, network and online user.

6.1.1 System Information

In this tab, user can check the hardware version, MCU version, kernel version, device ID, etc.

6.1.2 Event Information

In this tab, you can search for events like motion, sensor and video loss. The utility provides an interface to have a date based and a channel based search. This report can further be saved on a USB flash drive as an html file using the export button.

6.1.3 Log Information

In this tab, you can search for relevant logs as per the set date and event which includes operation, setup, playback, backup, search, check information and error. This report can further be saved on a USB flash drive as an html file using the export button.

6.1.4 Network Information

In this tab, you can check relevant parameters of network.

6.1.5 Online Information

In this tab, you can check the details of the connected online users.
Refresh: refresh the current interface.

Disconnect: Disconnect the online users to access DVR. If this function is used by the admin, the particular PC will not be able to access the device for five minutes. .

6.1.6 Record Information

In this tab, a user can check resolution, ftp and record status including sensor based recording, motion based recording, manual recording or schedule recording.

6.2 Manual Alarm

In this interface, user can trigger a manual alarm.

6.3 Disk Management

1. **Format the disk**

Step 1: Enter into disk management tab.

Note: Please format the hard disk before recording. If not formatted, it will show the status of the disk-free space, and total space at the bottom of screen.

Step 2: Click Refresh button to refresh the disk information in the list box;
Step 3: Select a hard disk and click Format button to start format.

Note: **All recorded files in the hard disk will be lost once it is formatted.**

2. **Advanced**

User may check model, S/N, firmware, health status of the disk in this interface. User also can monitor the temperature, internal circuit, dielectric material of the disk, analysis the potential problems of the disk and warn so as to protect its data.

6.4 Upgrade

The DVR can be upgraded by using USB flash drive. Get the upgrading software from your vendor when there is a new software version.

Upgrade Steps:

Step 1: Copy the upgrade software which gets from vendor into the USB storage device

Step 2: Connect the USB flash drive to the USB port.

Step 3: Enter Menu→Upgrade tab. Then the upgrade software name would be displayed in the upgrade list box.

Step 4: Select that software and then click upgrade button. It will upgrade automatically.

Note: Please wait for a while when the system reboots. Never cut off power during upgrading. The original configuration will be reserved after upgrade.

6.5 Logoff

Enter into Menu → Logoff tab. A log off dialogue box will popup. The device will log off by clicking “OK” button. If you want to log in again, click icon to enter into user name and password to re-login.

7 Remote Surveillance

7.1 IE Remote Surveillance

In order to view the DVR from a network, it must be connected to a LAN/WAN or Internet. The network setup should be done accordingly. Please refer to 4.6 Network Setup. This DVR supports IE browser, on Windows XP and Vista platform.

7.1.1 On LAN

Step 1: Enter into the DVR's Main Menu→Setup→Network tab to input IP address, Subnet Mask, etc .If using DHCP, please enable DHCP in both the DVR and the router.
Step 2: Enter Record Setup to set network video parameters like resolution, frame rate etc.
Step 3: Open IE on a computer on the same network. Input the IP address of the DVR in IE address bar and press enter.
Step 4: IE will download ActiveX component automatically. Enter the username and password in the subsequent window

Notice: If HTTP port is not 80, other number instead, need add the port number after IP address. For example, set HTTP port as 82, need input IP address like 192.168.0.25:82.

User name and password here are the same with that used on the DVR. The default is admin and 123456.

7.1.2 On WAN

There are two ways for the DVR to connect to internet.

1. Connect the DVR to Internet through router or virtual server

Step 1: Enter into the DVR's Main Menu→Setup→Network interface to input IP address, Subnet Mask, etc. If using DHCP, please enable DHCP in both the DVR and router.
Step 2: Forward IP address and port number in Virtual Server setup of the router or virtual server (If the user has enabled the UPnP function in both the DVR and router, he can skip this step). Configure the firewall to allow accessing the DVR.

Note: Port forwarding settings may be different in different routers and server. Please refer to the router's manual for details.

Step 3: Open IE browser, input IP address, or dynamic domain name and enter. If HTTP port is not 80, add the port number after IP address or domain name.

Step 4: IE will download ActiveX automatically. Then a window pops up and asks for user name and password. Input name and password correctly, and enter to view.

Note: If you cannot download and install ActiveX, please refer to FAQ Q8.

7.2 Remote Playback & Backup

7.2.1 Remote Playback

Click button to enter into record playback interface. Refer to Fig 7-5:

Select the record date and channels and double-click the file name in the record file list box. Then user can play that file and preview the picture.

.

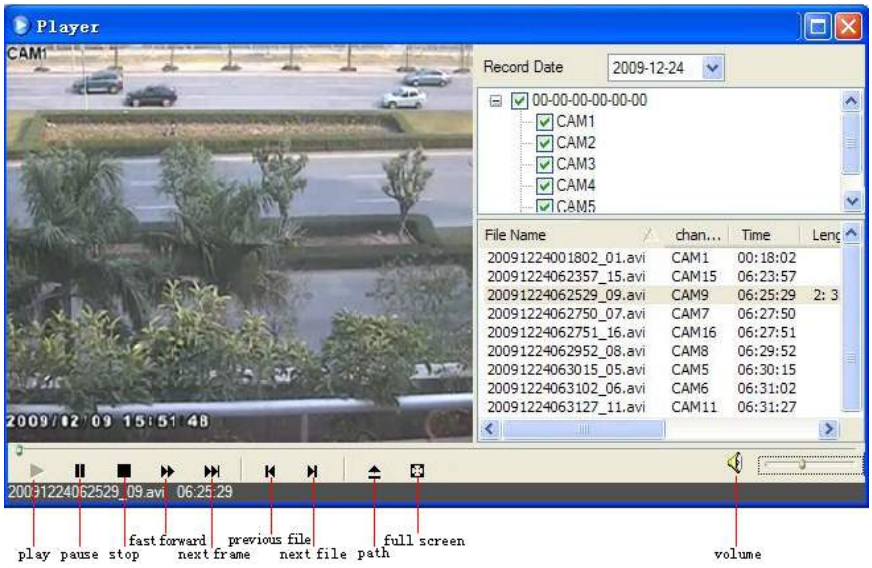


Fig 7-5 Play Record File Interface

This DVR supports remote time search, event search and file management.

By Time Search:

Step1: Enter into Search→Time search. Refer to Fig 7-6:

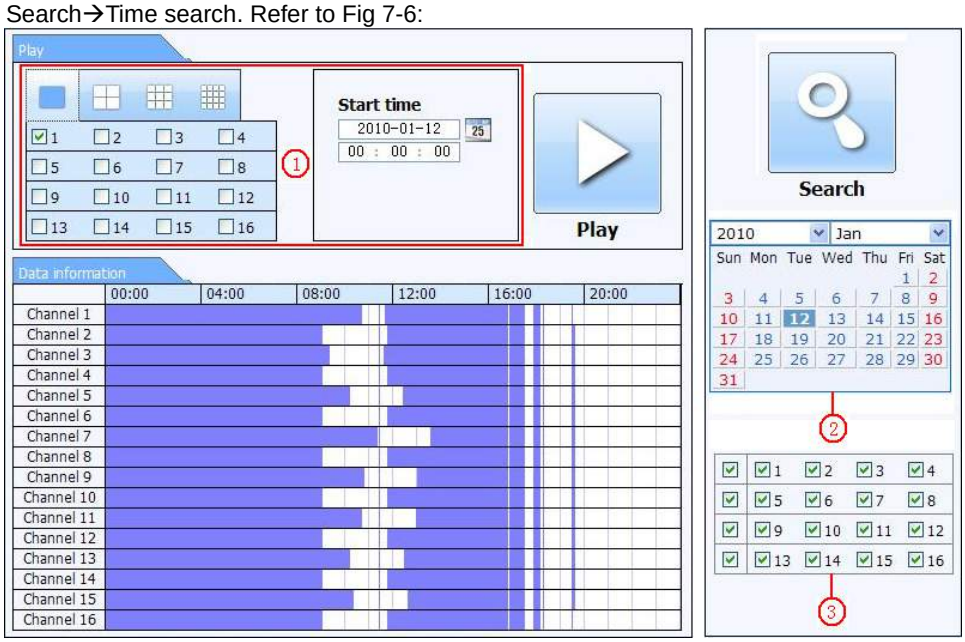


Fig 7-6 Time Search Interface

Step2: The highlight date in the area② indicates recorded data. Select the date in the area ② and record channels in area③ .

Step3: Click “Search” button. The record data will be displayed in the data information list box.

Step 4: Set the Start time and display mode in the area① as required.

Step 5: Click “play” button to playback.

Step 6: Click the relevant buttons in the interface for operation, like FF, pause, change channel mode, research, etc. Please refer to Fig 7-7:

Fig 7-7 Playback by Event Search

By Event Search:

Step1: Enter into Search→Event Search. Refer to Fig 7-8:

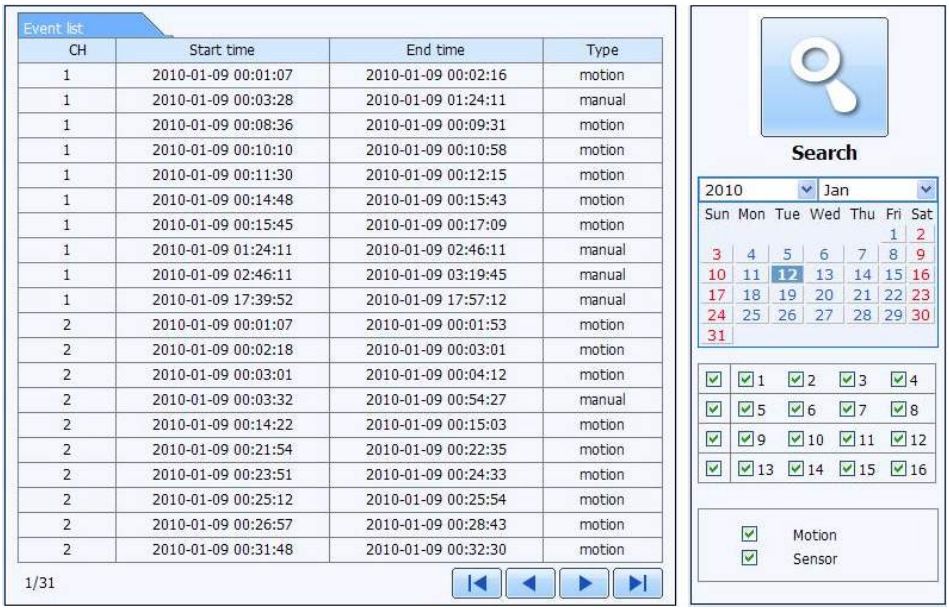


Fig 7-8 Event Search Interface

Step 2: Click the highlight date and select record channels.
Step 3: Checkmark the event type: motion and sensor.
Step 4: The events will be display in the event list box by clicking Search button.
Step 5: Double-click certain item to playback.

File Management
Step 1: Enter into Search→File management. Refer to Fig 7-9:
Step 2: Select highlighted date and channels.

Step 3: Click “Search” button to search the recorded files.

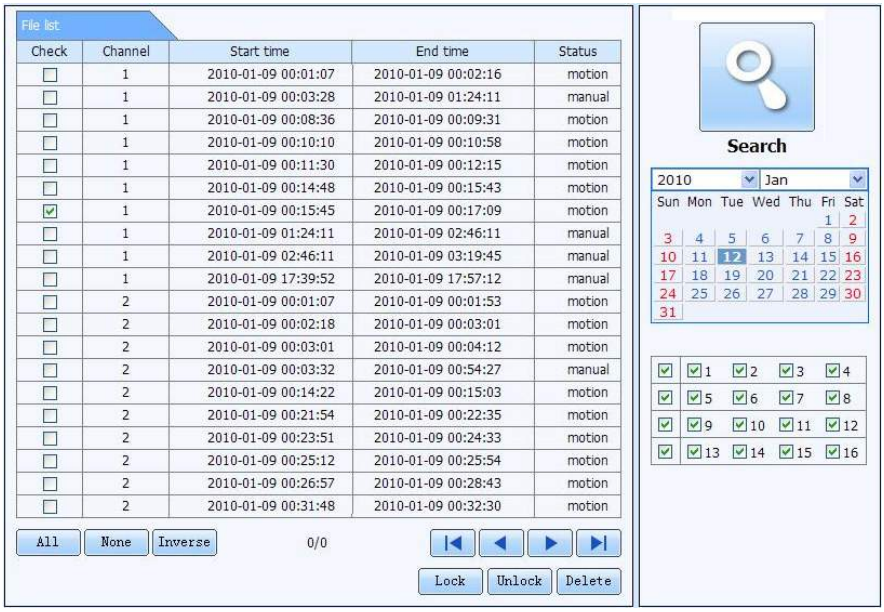


Fig 7-9 File Management Interface

Lock: Select certain file item in the file list box and then click “Lock” button to lock this file that ca not be deleted or overlaid.
Unlock: Select a locked file and then click “unlock” button to unlock this file.
Delete: Select an unlock file and then click “delete” button to delete this file from file list.

7.2.2 Remote Backup

Click Backup button to enter into backup interface. Refer to Fig 7-10:

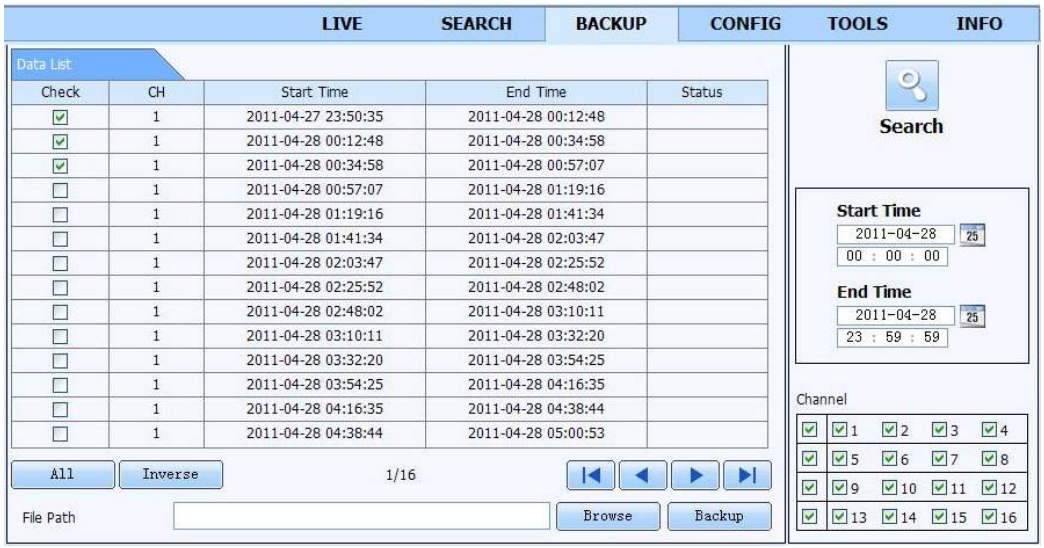


Fig 7-10 Remote Backup Interface

Step 1: Select channels, set the start and end time and then click “search’ button to display the file information in the file list box

Step 2: Select backup files and click “browse” button to set the path. Then click “backup” button to start backup. The backup files will be saved on user’s PC.

7.3 Remote System Configuration

You can do remote setup of the device which includes functions like basic configuration, live configuration, record configuration, schedule configuration, alarm configuration, network configuration, PTZ configuration and user configuration. You should select an option from the menu list on the left and then setup the relative parameters. Only one user can do configuration setup at a given point of time. Click Config tab to enter into the below interface as Fig 7-11:

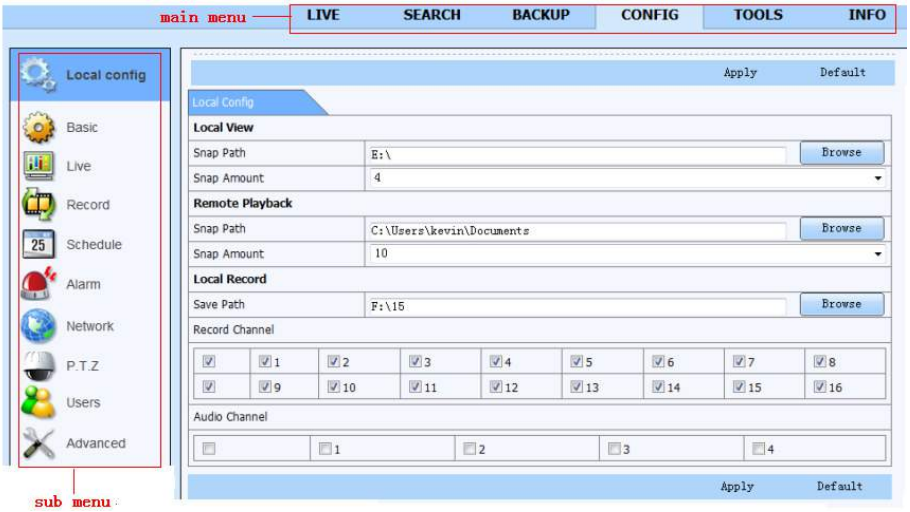


Fig 7-11 Remote System Configuration

The sub menu list and the options in every menu are similar to that of the DVR. Please refer to Chapter 4 Main Menu Setup Guide for more details.

7.4 Tools

Click on tool's tab to access the disk management tool. You can view the status of the HDD, change/view the read/write properties and can also format the HDD remotely.

7.5 Remote Information

The Info tab provides a web based interface to access the general information pertaining to the DVR's settings. It includes five submenus: System, Event, Log, Network and Online users. The sub menu list and the options in every menu are similar to that of the DVR. Please refer to Chapter 6 System information for more details.

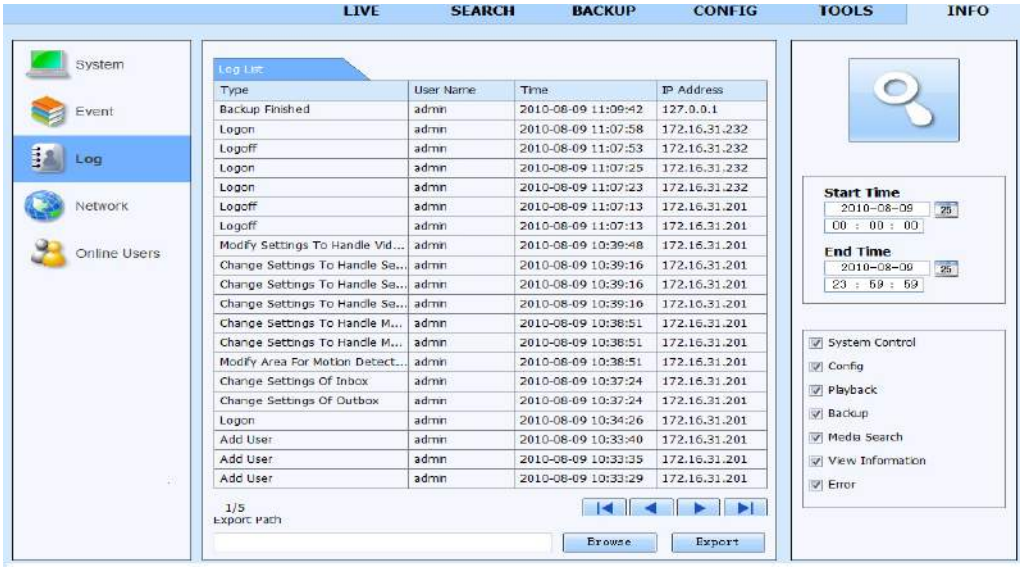


Fig 7-12 Remote Information Search

Note: There may be slight differences with respect to functions of remote surveillance between through IE and through Apple PC. Here we only take IE remote access as example.

Appendix A FAQ

Q1. Why the DVR cannot start after connected to the power?

a. The adapter has been damaged. Please change an adapter

b. The power of the adapter is not enough. Please remove the HDD to check

c. Hardware problem

Q2. There is not menu output or only has live image display

a. Check up whether other devices can display menu or long press Exit button to wait for login dialog box to appear.

Q3. The indicator of the DVR lights, but no output. Why?

a. The power of the adapter is not enough. Please remove the HDD or change an adapter to try.

b. The video format of the DVR is different from that of the monitor.

c. Connection problem. Please check the cable and the ports of monitor and DVR.

Q4. Why are no images displayed on parts or all of the channels of the DVR?

a. Connection problem. Please check the cable and the ports of camera and DVR.

b. Camera problem. Please check the cameras.

c. The video format of the DVR is different from that of the cameras. Please change DVR system format.

Q5. Cannot find HDD

a. The power of the adapter is not enough. Please change an adapter to try.

b. Connection problem. Please check the power and data cables.

c. The HDD is damaged. Change a new one.

Q6. Cannot record

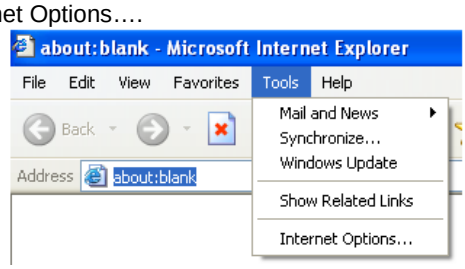
a. Don't format HDD. Please format it manually first.
b. Don't enable record function or incorrect setup. Please refer to Chapter 5.
c. HDD is full and not enables recycle function. Please refer to 4.3 Record configuration. Chang a new HDD or enable recycle.
d. The HDD is damaged. Change a new one.

Q7. Cannot use mouse.

a. wait 1-2 minutes after mouse connected.
b. Not detected. Plug/unplug several times.
c. The mouse is incompatible. Please change a mouse.

Q8. Cannot download ActiveX control.

a. IE browser blocks ActiveX. Please do setup following below.
① Open IE browser. Click Tools-----Internet Options….



② select Security------Custom Level….Refer to Fig 8-1
③ Enable all the sub options under “ActiveX controls and plug-ins” refer to Fig 8-2
④ Then click ok to finish setup.
b. Other plug-ins or anti-virus block ActiveX. Please uninstall or close them.

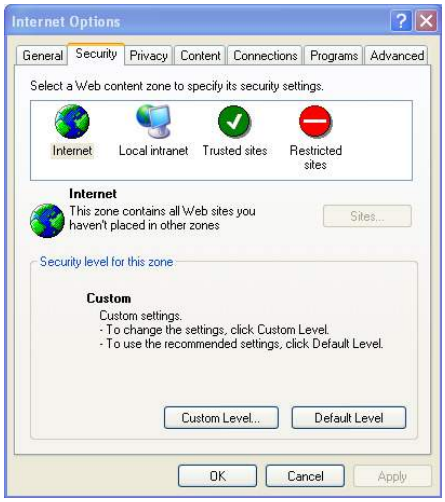


Fig 8-1

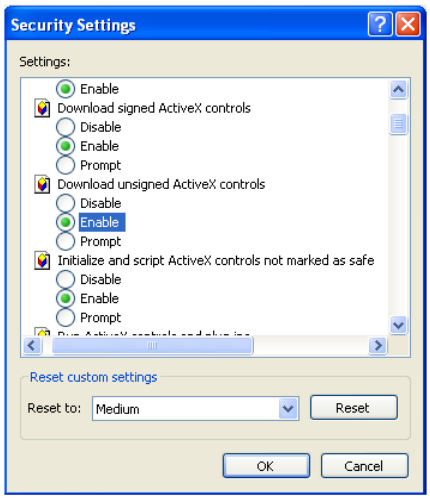


Fig 8-2

Q9: How to deal with when DVR starts, it displays "please wait…"all the time

First possible reason: hard-disk cable and data cable are not well connected.

Solution: Please check the connection of hard-disk cable and data cable and make sure they are well connected; If still not working, please unplug them and then try re-plugging again;

Second possible reason: It is forced to stop because hard disk has disabled track which causes the system checking hard disk cannot skip

Solution: Change another new hard disk or reformat the broken one

Q10: How to input password and digital numbers

The method to input password and digital numbers is to click the box behind *password* or *items* needing to input by numbers, and then the small keyboard will appear. Please select number or letter to input (the initial password is 123456), or you can use the digital keys in the front panel, or the digital keys on the remote controller.

Q11: Why is the hard disk used in a DVR identified a new hard disk if directly used to another same type DVR? And why must we format it again?

When DVR only uses one hard disk, the hard disk removed from one to another same type DVR can work normally without format. However, when a DVR adds to a new hard disk, it will identify the hard disk as a new one and inquire whether to format no matter whether this hard disk used or not in another same type DVR before. In this condition, it can be used normally after formatted according to the guide; if two or more hard disks used in different DVRs, when used in another DVR with the same type, they will be identified to be two or more new hard disks, and all of them need to format. In general, please do not try using more disks removed from different DVRs into another one in case the data lose.

Q12: What are the minimum configurations of PC for clients connecting?

PC Module	Parameters
CPU	Intel Celeron 2.4G
Motherboard	Intel 845
HDD	80G
RAM	512M
VGA	NVIDIA GeForce MX440/FX5200; ATIRADEON 7500/X300
OS	Windows 2000(SP4 above) /Windows XP(SP2 above) /VISTA
DirectX	9.0

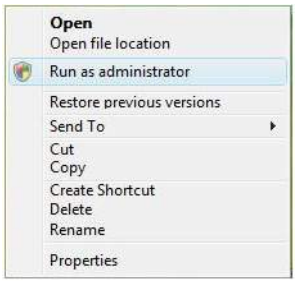
Q13: How to handle the situation when codec Control is blocked to install in the VISTA or Win7 system?

If user gets this problem, may have two ways to fix it:

a. Enter Control Panel→User Account and Family Safety → User Account Control(refer to below picture); click Turn User Account on or off. Cancel Use User Account Control (UAC) to help protect your computer.

« Turn User Acco...
Search
Turn on User Account Control (UAC) to make your computer more secure
User Account Control (UAC) can help prevent unauthorized changes to your computer. We recommend that you leave UAC turned on to help protect your computer.
Use User Account Control (UAC) to help protect your computer
OK
Cancel

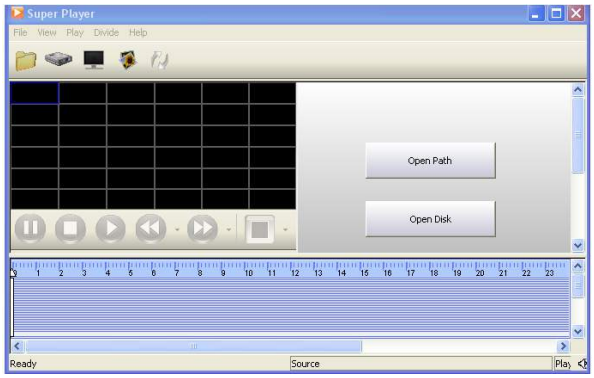
b. Right click IE browser (refer to Fig 13-2), select Run as administrator to run browser.

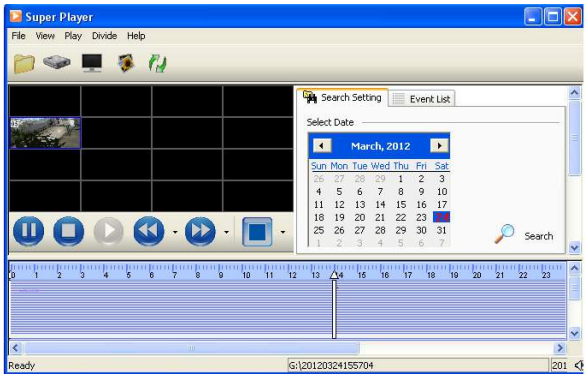


Q14. How to play the backup file?

a. Insert your USB device where the backup files are saved in the USB port of PC. If your files are saved in NVR format, you must have already downloaded the backup player box before doing backup. Then double click to open your USB disk to find your backup files and backup player. Double click

icon to install backup player. After you install it, open this player and click “Open Path” button to open your backup file. Next, click play button to play the backup file. Double click the image and then right click to enable audio. If you save your backup files in AVI format, you can directly open your file by using the media player which supports this format.


Super Player
File View Play Divide Help
Open Path
Open Disk
Ready
Source
Play


Super Player
File View Play Divide Help
Search Setting
Event List
Select Date
March, 2012
Sun Mon Tue Wed Thu Fri Sat
Search
Ready
G:\20120324155704

Appendix B Calculate Recording Capacity

Users can calculate the size of hard disk according to the saving time and DVR recording settings. The DVR uses fixed video bit rate. The below are the details at different settings.

Resolution	Frame Rate Totally(FPS)	Video Quality	Bit Rate (kbps)	Used Space(MB/h)
WD1	25(PAL) 30(NTSC)	Highest	2.5M	1125
		Higher	2M	900
		Medium	1.75M	788
		Low	1.5M	675
		Lower	1M	450
		Lowest	768	338

The calculation format is: **Total Recording capacity =Used space per hour (MB/h) (coverage rate of hard disk) × recording time (hour) ×channel numbers**

For instance, one customer uses PAL cameras, set resolution to WD1, video quality to lowest, frame rate to 25 fps for enabling total 4channels. He wants the unit to record continuously in a month. Below is the calculation:

Total Recoding capacity =338 (mb/h) X 24(hours/day) X30(days) X4(channels)= 973440 (MB)≈950(GB)

Therefore, customers just install one SATA HDDs with 1000GB, it can almost record for one month.

Appendix C Compatible Devices

1. Compatible USB drive after test.

Brand	Capacity
SSK	512MB, 1G, 2GB
Netac	4GB
Kingston	2GB
Aigo	2GB
Smatter vider	1GB
SanDisk	4GB

2. Compatible SATA CD/DVD writers after test

Brand	Model
TECLAST	GH22NP20/TL-22XD
BENQ	DW220S-0K4
LITEON	DH—20A6S01C
LITEON	DH-20A4P02C
SAMSUNG	TS-H653B

3. Compatible HDD list

Brand	Capacity
Seagate Barracuda LP ST3200542AS	2TB
Seagate Barracuda 7200.11 ST31500341AS	1.5T
Seagate SV35.3 ST31000340SV	1T
Seagate Pipeline HD.2	500G
Seagate Barracuda 7200.10	320G
Seagate Barracuda 7200.10 ST3250310AS	250G
Seagate Barracuda 7200.11 ST3160813AS	160G
Seagate Barracuda 7200.10 ST380815AS	80G
Maxtor Diamondmax 21 STM3160215AS	160G
HITACHI Deskstar HDS721616PLA380	160G
HITACHI Deskstar	80G
WD WD1600JS	160G
Samsung HD161HJ	160G

Appendix D 4-CH Specifications

Compression format	H.264 Main Profile
Video output	Composite：1.0V p-p/75Ω BNC×2 , VGAX1, HDMI X1
Video input	Composite：1.0V p-p/75Ω BNC×4
HDMI/VGA Resolution	1920*1080/1280*1024 /1024*768/ 800*600
Record Resolution	960*576/704*576/352*288 (PAL), 960*480/704*480/352*240 (NTSC)
Display Frame Rate	100FPS (PAL), 120FPS (NTSC)
Record Frame Rate	100FPS (PAL), 120FPS (NTSC)
Audio input	RCA X4
Audio output	RCA X1
Alarm input	NO or NC 4CH
Alarm output:	4CH
Record Mode	Manual / Sensor /Timer / Motion detection
Simplex/Duplex/Triplex	Pentaplex
Network Interface	RJ45 (LAN, INTERNET)
PTZ control	YES
Communication interface	RS485, USB2.0 x 2(one for backup, another for USB mouse)
Disk info	SATA x 4+DVD-RW x 1 or SATA x 8; E-SATA x 1
Remote controller	YES
Power supply	110V-220V
Temperature	0℃-50℃
Humidity	10%-90%
Average Operating Power （Excluding HDD）	≤40W

Appendix E 8-CH Specifications

Compression format	H.264 Main Profile
Video output	Composite：1.0V p-p/75Ω BNC×2 , VGAX1, HDMI X1
Video input	Composite：1.0V p-p/75Ω BNC×8
HDMI/VGA Resolution	1920*1080/1280*1024 /1024*768/ 800*600
Record Resolution	960*576/704*576/352*288 (PAL), 960*480/704*480/352*240 (NTSC)
Display Frame Rate	200FPS (PAL), 240FPS (NTSC)
Record Frame Rate	200FPS (PAL), 240FPS (NTSC)
Audio input	RCA X8
Audio output	RCA X1
Alarm input	NO or NC 8CH
Alarm output:	4CH
Record Mode	Manual / Sensor /Timer / Motion detection
Simplex/Duplex/Triplex	Pentaplex
Network Interface	RJ45 (LAN, INTERNET)
PTZ control	YES
Communication interface	RS485, USB2.0 x 2(one for backup, another for USB mouse)
Disk info	SATA x 4+DVD-RW x 1 or SATA x 8; E-SATA x 1
Remote controller	YES
Power supply	110V-220V
Temperature	0℃-50℃
Humidity	10%-90%
Average Operating Power （Excluding HDD）	≤60W

Appendix F 16-CH Specifications

Compression format	H.264 Main Profile
Video output	Composite：1.0V p-p/75Ω BNC×2, VGAX1, HDMI X1
Video Input	Composite：1.0V p-p/75Ω BNC×16
HDMI/VGA Resolution	1920*1080/1280*1024 /1024*768/ 800*600
Record Resolution	960*576/704*576/352*288 (PAL), 960*480/704*480/352*240(NTSC)
Display Frame Rate	400FPS (PAL), 480FPS (NTSC)
Record Frame Rate	400FPS (PAL), 480FPS (NTSC)
Audio Input	RCA X16
Audio output	RCA X1
Alarm Input	NO or NC 16CH
Alarm output	4CH
Record Mode	Manual / Sensor /Timer / Motion detection
Simplex/Duplex/Triplex	Pentaplex
Network Interface	RJ45 (LAN, INTERNET)
PTZ control	YES
Communication interface	RS485, USB2.0 x 2(one for backup, another for USB mouse)
Disk info	SATA x 4+DVD-RW x 1 or SATA x 8; E-SATA x 1
Remote controller	YES
Power Supply	110V-220V
Temperature	0℃-50℃
Humidity	10%-90%
Average Operating Power（Excluding HDD）	≤80W